

L-type Ca⁺⁺ CP β1 (D-15): sc-32079

BACKGROUND

Voltage-dependent Ca⁺ channels mediate Ca⁺ entry into excitable cells in response to membrane depolarization, and they are involved in a variety of Ca⁺-dependent processes, including muscle contraction, hormone or neurotransmitter release and gene expression. Calcium channels are highly diverse, multimeric complexes composed of an α-1 subunit, an intracellular β subunit, a disulfide linked α-2/δ subunit and a transmembrane γ subunit. Ca⁺ currents are characterized on the basis of their biophysical and pharmacologic properties and include L-, N-, T-, P-, Q-, and R- types. L-type Ca⁺ currents initiate muscle contraction, endocrine secretion and gene transcription, and can be regulated through second-messenger activated protein phosphorylation pathways. L-type calcium channels may form macromolecular signaling complexes with G protein-coupled receptors, thereby enhancing the selectivity of regulating specific targets.

REFERENCES

1. Perez-Reyes, E., et al. 1995. Molecular biology of calcium channels. *Kidney Int.* 48: 1111-1124.
2. Randall, A.D. 1998. The molecular basis of voltage-gated Ca⁺ channel diversity: is it time for T? *J. Membr. Biol.* 161: 207-213.
3. Catterall, W.A. 2000. Structure and regulation of voltage-gated Ca²⁺ channels. *Annu. Rev. Cell Dev. Biol.* 16: 521-555.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 601011. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: CACNB1 (human) mapping to 17q12; Cacnb1 (mouse) mapping to 11 D.

SOURCE

L-type Ca⁺⁺ CP β1 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of L-type Ca⁺⁺ CP β1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32079 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

L-type Ca⁺⁺ CP β1 (D-15) is recommended for detection of L-type calcium channel β1 isoforms a, b and c of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

L-type Ca⁺⁺ CP β1 (D-15) is also recommended for detection of L-type calcium channel β1 isoforms a, b and c in additional species, including equine, canine, bovine and porcine.

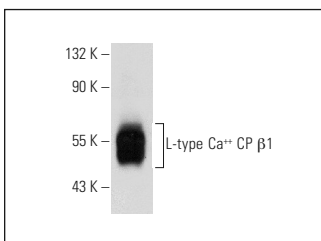
Suitable for use as control antibody for L-type Ca⁺⁺ CP β1 siRNA (h): sc-42694, L-type Ca⁺⁺ CP β1 siRNA (m): sc-42695, L-type Ca⁺⁺ CP β1 shRNA Plasmid (h): sc-42694-SH, L-type Ca⁺⁺ CP β1 shRNA Plasmid (m): sc-42695-SH, L-type Ca⁺⁺ CP β1 shRNA (h) Lentiviral Particles: sc-42694-V and L-type Ca⁺⁺ CP β1 shRNA (m) Lentiviral Particles: sc-42695-V.

Positive Controls: rat skeletal muscle extract: sc-364810.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



L-type Ca⁺⁺ CP β1 (D-15): sc-32079. Western blot analysis of L-type Ca⁺⁺ CP β1 expression in rat skeletal muscle tissue extract.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
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Try **L-type Ca⁺⁺ CP β1 (Y-2D68): sc-134377**, our highly recommended monoclonal alternative to L-type Ca⁺⁺ CP β1 (D-15).